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# Needs Assessment of Healthcare Services for Transitioning College Students

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Needs Assessment of Healthcare Services for Transitioning College Students

By

Victoria Miller

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of  
the requirements of the Sally McDonnell Barksdale Honors College.

Oxford

May 2017

Approved by

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I would also like to thank Dr. Knight, Dr. Samonds, and the entire honors college faculty for helping distribute the survey. I could not have completed this project without their help.

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## **ABSTRACT**

VICTORIA MARIE MILLER: Needs Assessment of Healthcare Services for  
Transitioning College Students

Investigators measured students' needs for healthcare services during their transition from pediatric to adult healthcare at The University of Mississippi. Also, investigators examined chronically ill students' adherence to their conditions needs and measured a baseline of college freshman's knowledge about healthcare. Data was collected using a self-administered cross-sectional survey online through Qualtrics. This study was divided into four focuses in order to assess the subject's health status, health knowledge, healthcare practices, and barriers to transitioning. The investigator found that most of the students' health status compares to the national average with minor differences, a number of students have little knowledge about their health, a significant portion of students have bad healthcare practices, and a small but significant proportion of students reported having barriers to transitioning. The investigators concluded that students at The University of Mississippi would benefit from organizations or departments on campus setting up services for the students to go to that will educate them on their health, teach them how to self-manage their health and use health services, and reduce any barriers that the students have in communicating with their doctors. Additional studies need to be done to compare the college student's knowledge about healthcare. These studies need to be expanded to all classes along with being conducted at other universities. The additional studies need to re-evaluate

the survey and focus more on why student's academic performance is affected differently by disease/injury so that schools can develop programs to help reduce this issue. With these additional studies, the data can be compared at a regional level and more standardized programs can be formed to help the students learn about their healthcare.

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## **LIST OF ABBREVIATIONS**

ACHA	American College Health Association
ADHD	Attention Deficit and Hyperactivity Disorder
EDHE	Course Code for the First-Year Experience Program Classes at Ole Miss
HIV	Human Immunodeficiency Virus
IBS	Irritable Bowel Syndrome
PID	Pelvic Inflammatory Disease
UNC	University of North Carolina at Chapel Hill
U.S.	United States
UTI	Urinary Tract Infection
STD	Sexually Transmitted Disease

## **BACKGROUND**

The transition to college for students with chronic conditions or disabilities bestows itself as a critical developmental challenge due to increased independence and responsibilities along with adjusting to a new environment (Wodka & Barakat, 2007; Wrench & King, 2013; Kwan et. al, 2013). With advancing medicine, approximately ninety percent of all children born today with chronic conditions or disabilities are expected to reach adulthood (Ladores, 2015; Hopper et. al, 2014). Approximately 10,000 students with major health- disabilities enrolled in four- year colleges in 2000 (Royster & Marshall, 2008). The transition from pediatric to adult care of young adults with chronic conditions and disabilities has gained increasing attention due to studies that shows a decline in access and use of healthcare services leading to bad outcomes (Chu et. al, 2015).

Students begin college without fully understanding their illness and how to manage it (Hergenroeder, et. al, 2015; Young & Calloway, 2015). These students lack knowledge of how to schedule appointments, talk to their doctor without their parents, understand medication information, understand health history, understand insurance policies, understand healthcare privacy information, and manage prescriptions (McManus et. al, 2015; Targett et. al, 2013; McManus et. al, 2014). These students are also in an entirely new environment with environmental pressures surrounding them such as alcohol use, drug use, academic demands, social expectations, roommates, and noise in residential halls that all lead to vulnerability along with a feeling of loss of a previous support system (Freudenberg, et. al, 2013).

However, there has been a lack of support programs at colleges to help with the transition from pediatric to adult care (Levy, 2015). DePaul University has created a program called The Chronic Illness Initiative (CII) to provide student support by eliminating misunderstandings between the faculty and students about their health conditions, helping form trust between the two, assisting with financial aid, integrating students socially, increasing outreach, and increasing public awareness (Bridgett et. al, 2015). The University of New Hampshire also has a chronic illness support system with their health services that focuses on education, academic assistance, and support groups (Westcott, 2008).

The University of Mississippi Health Center focuses on acute care, allergies, routine and travel immunizations, men's health, women's health, and sexually transmitted illnesses (Health Center, n.d.). The University of Mississippi School of Pharmacy has begun to develop a program to provide medication therapy management services and disease education for patients with diabetes (Collaborative focuses on improving health of diabetics in the Delta, 2010.). The University of Mississippi Medical Center (UMMC) has listed in its strategic goals to increase value based care specifically with a transitional of care program (Strategic Goals, n.d). There have been no published surveys of a needs assessment survey of the health services that students at The University of Mississippi need.

## **METHODS**

### **Purpose**

This research aims to measure students' needs for healthcare services during their transition from pediatric to adult healthcare at The University of Mississippi. Additional aims are to examine chronically ill students' adherence to their conditions needs and to measure a baseline of college freshman's knowledge about healthcare.

### **Study Design**

A self-administered cross-sectional survey will be distributed in classes offered in the fall 2016. With instructors' permission, an electronic Qualtrics survey will be distributed to each student in the class at the beginning of the class period and completed during class time. If it is not permissible for the survey to be offered during class time, an email will be sent to the students containing a letter explaining the survey along with the electronic link of the survey.

### **Study Population- Sample**

Participants will be recruited from all of the EDHE freshmen experience classes and Honors freshmen classes offered at The University of Mississippi in the fall of 2016. The survey was distributed electronically in class to 73 honors students in five different sections of Honors 101 classes. Also, the survey was distributed electronically to 3,087 students enrolled in either EDHE 105 or EDHE 305 classes.

### **Survey**

An electronic survey was designed to collect data on demographic variables, health status, health knowledge, healthcare practices, and barriers to transitioning

healthcare. Demographic variables and health status were modeled after American College Health Association's (ACHA) National College Health Assessment. These questions were basic demographic variables such as, age, gender, ethnicity, health status, and disease status. Health knowledge and practices were modeled after StaRx Transition Readiness Questionnaire (Adolescent Version), UNC TRxANSITION Scale for Adolescents and Young Adults, and Six Core Elements of Health Care Transition 2.0. This part of the survey contained questions about general knowledge about their illness, health insurance, and what to do in the case of an emergency along with questions about their practices such as making their own doctors appointments, picking up their own prescriptions, and taking their medications. Barriers for transitioning were modeled after StaRx Transition Readiness Questionnaire (Adolescent Version). This part of the survey contained questions about their perception of the difficulty of switching from pediatric to adult care and the difficulty of talking to and seeing a doctor by themselves. Refer to Appendix A for the survey questions that were administered.

### **Planned Study Procedure**

The Registrar's office at The University of Mississippi will provide a list of EDHE and Honors 101 courses offered in the fall 2016. The investigator will contact Dr. Knight, course director of EDHE classes, and Dr. John Samonds, Associate Dean of the Sally McDonnell Barksdale Honors College, by email to ask for permission to distribute the survey at the beginning of the class period of each of these courses. All of the sections of these classes will be selected to participate in the study. If permission is granted, each instructor will forward an electronic email to the students that contains a

letter explaining the survey along with the electronic link of the survey. At no time will the name of the student be recorded.

### **Actual Study Procedure**

Due to time constraints in class time, the investigator was not able to distribute the survey at the beginning of the class period of each of these courses. The survey was distributed in an electronic email that had a letter explaining the survey along with the electric link of the survey to the students enrolled in either EDHE 105 or EDHE 305 in the fall of 2016. Also, the individual Honors professors chose whether they had enough class time to have the survey distributed in class or not. The professors who decided to participate in this study sent out the email containing a letter explaining the survey and the link prior to class, allowed the investigator to speak in class, and gave the students time to complete the survey during class. Refer to the Appendix for the email script, instructions to instructors, student letter, and oral instructions given by the investigator.

### **Data Analysis**

After completion of the data collection, the completed surveys were transformed to a report in the Qualtrics software. Cross tabulations were made and downloaded to Excel for interpretation.

## **RESULTS**

### **Response Rate**

A total of 3,160 surveys links were sent out in the time period of August 25 to October 31, 2017. Surveys were distributed to 73 honors college students, and at least 61 responses were received from these students. It is possible that an honors student submitted the survey after the survey was distributed to the EDHE classes. Also, surveys were distributed to 3,087 EDHE students. It is possible that students could have received the survey link from both courses. Also, students could have submitted more than one survey since the access to the link was not restricted. At the end of data collection, we had received 324 responses. We excluded 6 of the surveys due to the respondent being under the age of 18. Additionally, 42 of the surveys were not entirely completed; some of the questions were skipped. Therefore, 318 surveys were used for data analysis and only 276 of those were entirely completed.

### **Demographics**

In order to better understand some of the characteristics of respondents, multiple demographic questions were asked. The minimum age to complete the survey was 18. The majority of respondents were 18 years of age (71.60%). Sixty-eight males participated in the study (21.45%). Two hundred forty-eight females participated in the study (78.23%). One transgender participated in the study (0.32%). The majority of respondents reported their race as white (87.62%) and their enrollment status as full time (99.05%). Two international students completed this survey (0.63%). The majority of the respondents lived in campus residence halls (90.19%) and reported their expected cumulative grade point average of that semester to be between a 3.51 and 4.0 (62.94%).



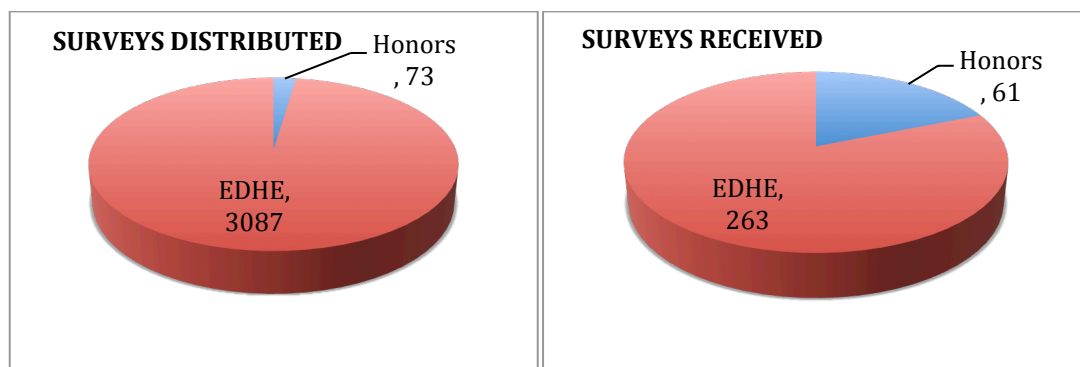
Approximately 20.38% of the respondents have parents with a career in the medical field and 30.35% plan to have a career in the medical field themselves. Additional sample characteristics can be found in Table 1.

Table 1: Demographic Characteristics

<b>Age</b>	<b>Number of Respondents (%)</b>
Under 18	6 (1.85)
18	232 (71.60)
19	62 (19.14)
20	9 (2.78)
21	7 (2.16)
22	1 (0.31)
23	0
24 and older	7 (2.16)
<b>Gender</b>	<b>Number of Respondents (%)</b>
Male	68 (21.45)
Female	248 (78.23)
Transgender	1 (0.32)
<b>Ethnicity</b>	<b>Number of Respondents (%)</b>
African American or Black	24 (7.62)
American Indian, Alaskan Native, or Native Hawaiian	1 (0.32)
Asian or Pacific Islander	6 (1.90)
Hispanic or Latino/a	5 (1.59)
White	276 (87.62)
Biracial or Multiracial	3 (0.95)
Other	0
<b>Enrollment Status</b>	<b>Number of Respondents (%)</b>
Full time	312 (99.05)
Part time	3 (0.95)
Other	0
<b>International Student</b>	<b>Number of Respondents (%)</b>
Yes	2 (0.63)
No	313 (99.37)
<b>Living Arrangements</b>	<b>Number of Respondents (%)</b>
Campus residence hall	285 (90.19)
Fraternity or sorority house	0
Other on-campus/university housing	4 (1.27)
Parent/guardian home	4 (1.27)
Other off-campus housing	22 (6.96)
Other	1 (0.32)
<b>Expected Semester Cumulative Grade Point Average</b>	<b>Number of Respondents (%)</b>
3.51 to 4.0	197 (62.94)

3.01 to 3.5	97 (30.99)
2.51 to 3.0	18 (5.75)
2.01 to 2.50	0
2.0 or below	1 (0.32)
<b>Parents with a career in the medical field</b>	<b>Number of Respondents (%)</b>
Yes	64 (20.38)
No	250 (79.62)
<b>Planning on having a career in the medical field themselves</b>	<b>Number of Respondents (%)</b>
Yes	95 (30.35)
No	218 (69.65)

Figure 1: Response Rate



## Health Status

In order to get a baseline of health data from our sample, we asked several questions to determine the health status of the respondents. Respondents were asked to describe their general health. Approximately 42.31% of respondents describe their health as very good. See additional data in Figure 2.

Respondents were asked do you have any of the following to several different illnesses. The most common responses were Attention Deficit and Hyperactivity Disorder (ADHD) and partial sightedness/blindness with frequencies of 48 and 38 respectively. Respondents also selected chronic illness with a frequency of 17. More data pertaining to the different illnesses respondents reported having is shown in Figure 3.

Also, respondents were asked which illnesses they had been diagnosed or treated by a professional with in the last 12 months. The most common responses were sinus infection, allergies, and strep throat with frequencies of 144, 120, and 75 respectively. Additional data for this question can be found in Figure 4.

Lastly, respondents were asked which of the following illnesses affected their academic performance in the last 12 months with a scale of the severity. The following illnesses were selected the most commonly for their negative impact on academic illness: depression, anxiety, learning disability, and ADHD. More data about the illnesses that affected academic performance can be found in Figure 5.

Figure 2: General Health

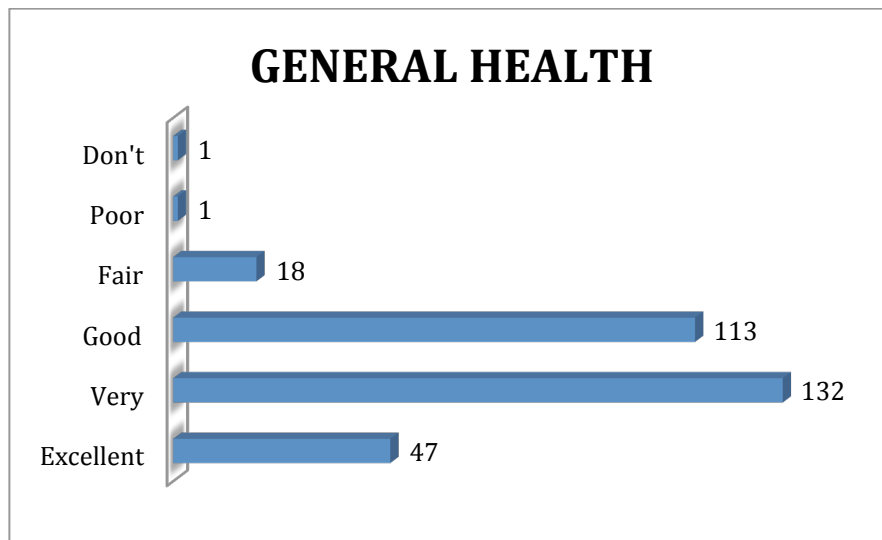


Figure 3: Conditions of Respondents

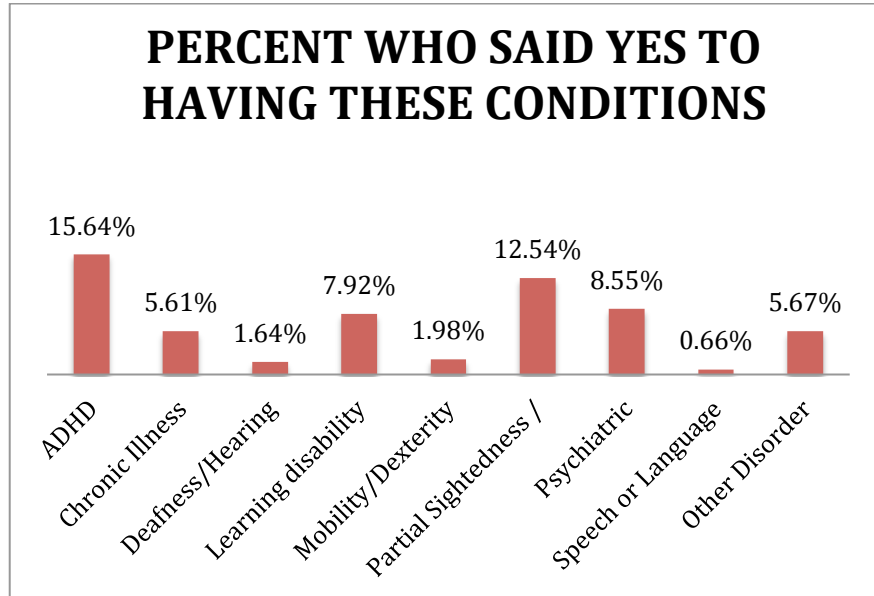


Figure 4: Respondents Diagnosed or Treated by a Professional

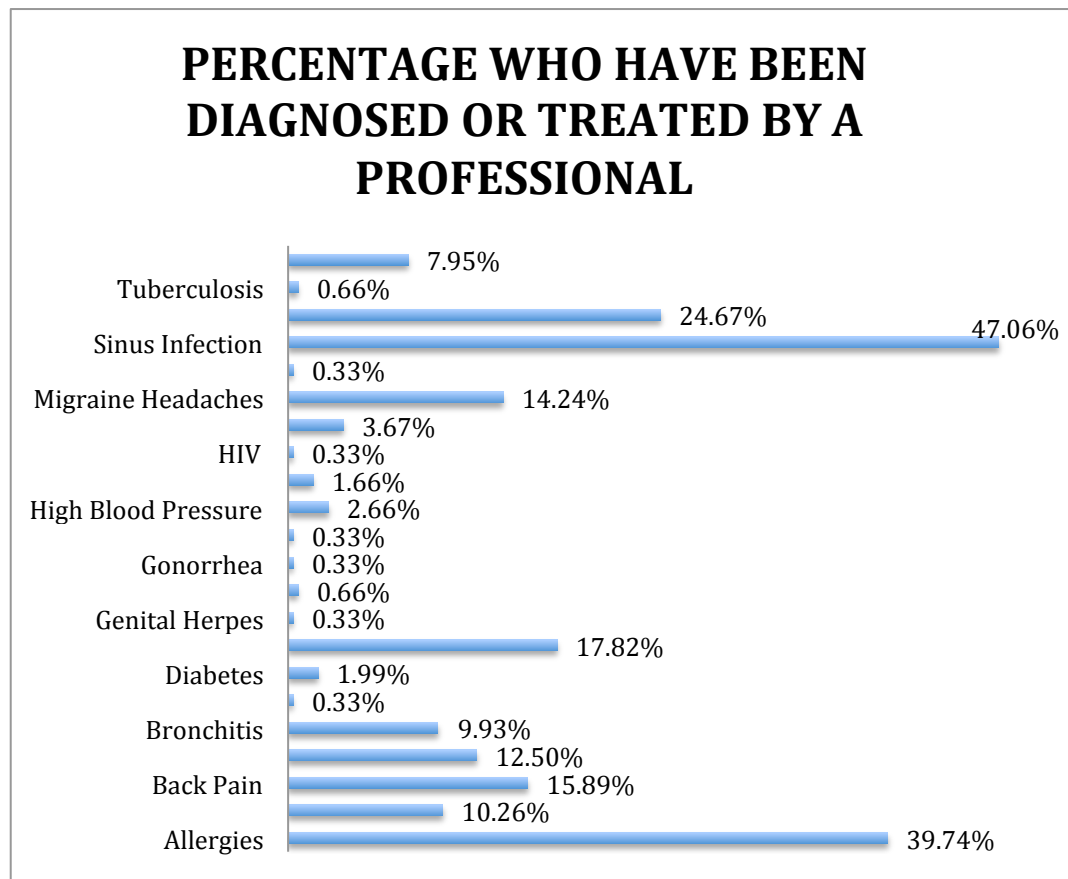
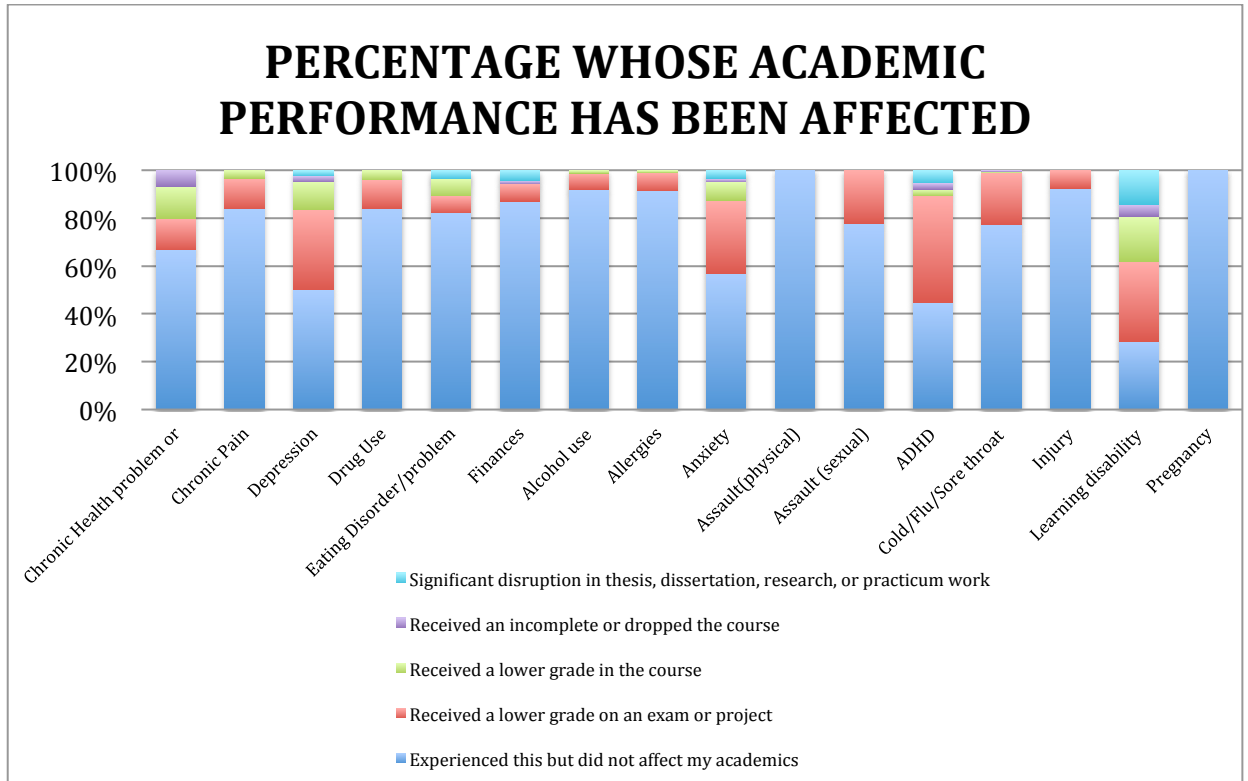


Figure 5: Illness's Effect on Academic Performance



## Health Knowledge

Specific questions were asked to determine the individual's knowledge about their health. Respondents were asked how often do you use the Internet, books, or other guides to find out more about your illness. Sometimes was the most common answer with a frequency of 111. The least common answer was never with a frequency of 20. Always was selected by 49 individuals for this question. Additional data for this question can be found in Figure 6. Also, respondents were asked a grouping of questions to determine how much they know about their health. Respondents were asked how much they know about their illness. Respondents answered some with the highest frequency of 82 followed by a lot with a frequency of 80. The least common answer choice was

nothing with a frequency of 6. Respondents were asked how much they know about taking care of their illness. The most common answer was a lot with a frequency of 92 and the least common answer was nothing with a frequency of 7. To conclude this grouping, respondents were asked how much they know about what will happen if they don't take their medicines. The most common answer was a lot with a frequency of 88 and the least common answer was nothing with a frequency of 11. More data for this grouping of questions can be found in Figure 7, 8, and 9.

Another grouping of seven statements were asked to assess the respondent's healthcare knowledge. Approximately 80% of the respondents selected that they know their symptoms including the ones they need to see a doctor for while 18% selected they needed to learn their symptoms. The majority of respondents with 82% selected that they knew what to do in case they have a medical emergency while 15% selected that they needed to learn what to do in a medical emergency. Approximately, 90% of respondents selected that they know their own medicine, what they are for, and when they needed to take them while 7% responded that they needed to learn information about their medicines. About 90% of respondents selected that they know their allergies to medicines and medicines they should not take while 8% say that they need to learn these facts. Approximately 64% of the respondents selected that they know that healthcare privacy changes at age 18 and 35% selected that they needed to learn about healthcare privacy. The majority of respondents with 64% selected that they knew where to get medical care when the doctor's office is closed and 35% responded that they needed to learn where to go. About 74% of respondents selected that they knew how to fill out

medical forms and 25% selected that they needed to learn how to. Additional data based on these seven statements can be seen in Figure 10.

Respondents were asked what is their primary source of health insurance. The most frequent response was their parent's plan with a frequency of 254. Three respondents did not know if they have health insurance or not. More data about the primary source of health insurance can be found in Figure 11. The last question in the health knowledge section is a question about nutrition. The most frequent response was does not know with 118 people selecting this. Additional data about nutrition can be found in Figure 12.

Figure 6: Finding Out More About Your Illness

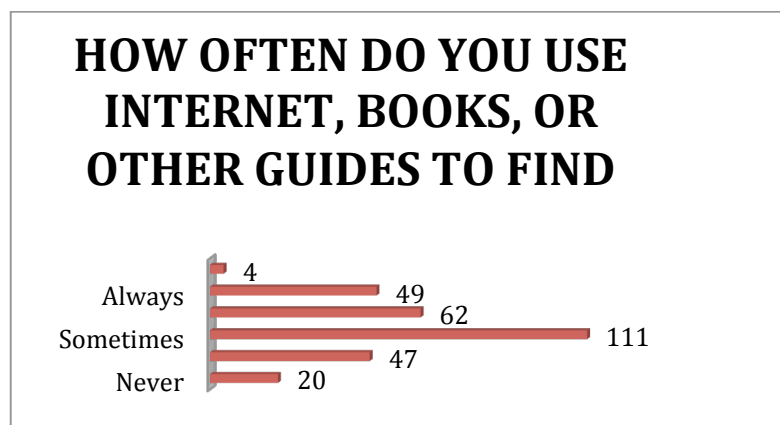


Figure 7: Knowledge About Your Illness

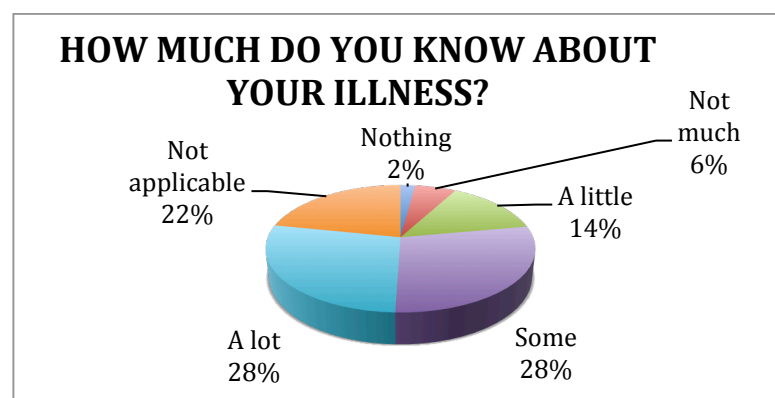


Figure 8: Knowledge About Taking Care of Your Illness

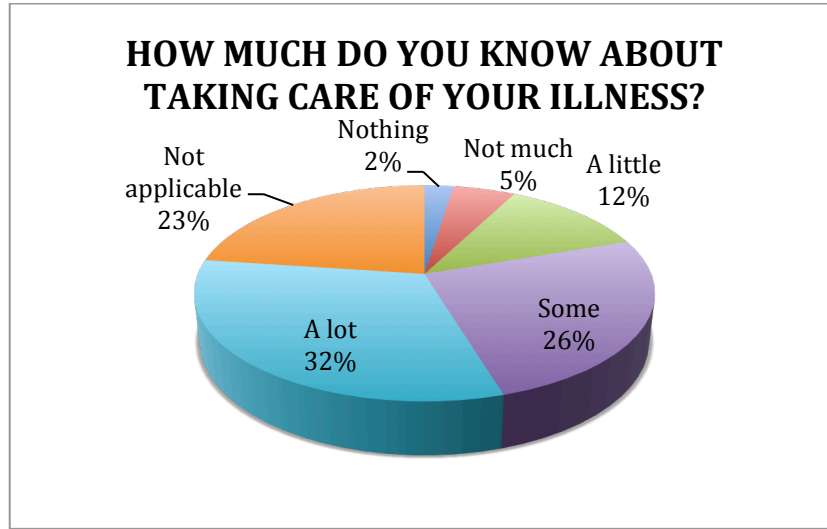


Figure 9: Knowledge About Not Taking Your Medicines

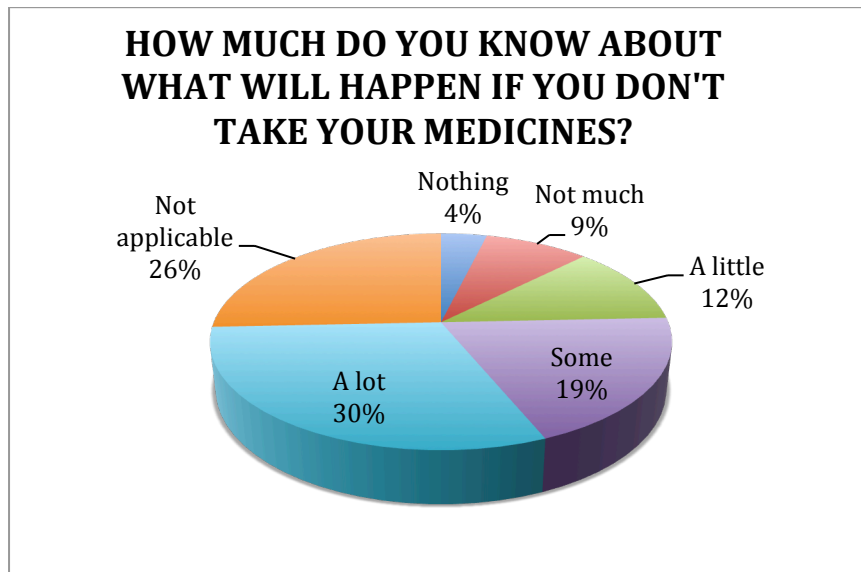




Figure 10: Healthcare Knowledge

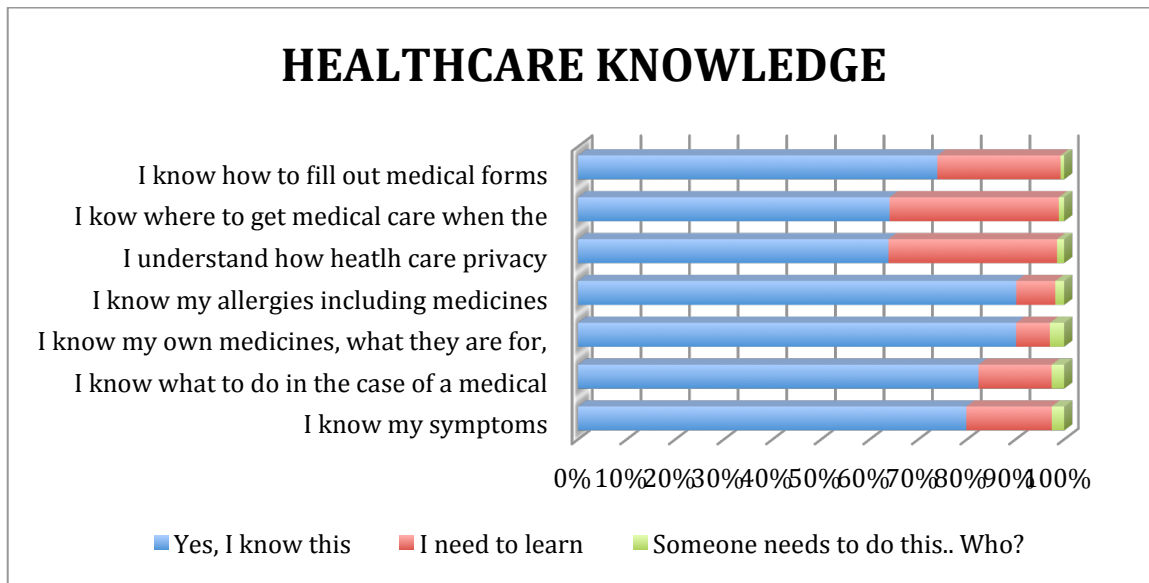


Figure 11: Primary Source of Health Insurance

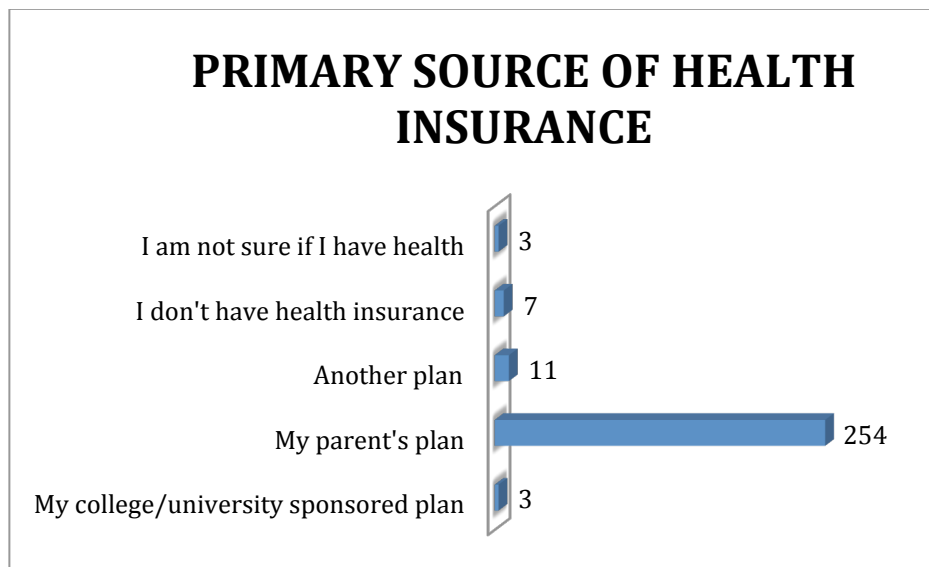
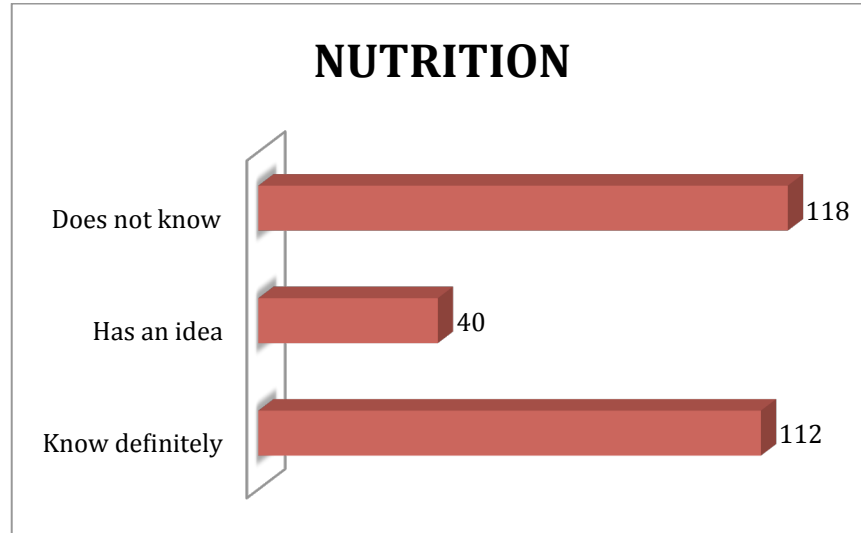


Figure 12: Nutrition



### Healthcare practices

Several questions were asked to determine the respondent's healthcare practices. The first question was a series of questions asking about their healthcare practices in the last 3 months. Respondents were asked about how often they took their medicine on their own in the last 3 months. The majority (53%) selected always as their answer choice, but never was chosen by 4 (1.5%) respondents. Also, respondents were asked how often they asked their doctor or nurse questions about their illness, medicines, or medical care in the last 3 months. The most frequent response was sometimes with a frequency of 81. The least frequent response was never with a frequency of 22. Respondents were asked how often they made their own appointments in the last 3 months. The most common response was sometimes with a frequency of 70 and never was selected with a frequency of 22. Respondents were asked how often they needed someone to remind them to take their medicines in the last 3 months. The most common response was never with a

frequency of 95. Always was selected by 4 respondents. Respondents were asked how often did you forget to take your medicine within the last 3 months. The most common response was almost never with a frequency of 96. Always was selected by 3 respondents. Lastly, respondents were asked how often did you work with your doctor to take care of new health problems that came up. The most frequent response was sometimes with a frequency of 87. Never was selected by 35 respondents. Additional data about healthcare practices in the last 3 months can be found in Figure 13.

The next set of questions addresses questions about adherence. Respondents were asked in a typical week, do they usually miss a full day of medicine either because they forget to take it or didn't want to take it. The most frequent response was no with a frequency of 88. Also, respondents were asked if they usually came to doctor appointments when they are scheduled. The majority (97%) responded yes. More data about adherence can be found in Figure 14.

Respondents were asked a series of questions to determine their self-management skills. The first question asks whether they usually call in prescription refills themselves. The most frequent response was yes with a frequency of 85 followed by no with a frequency of 75. Respondents were also asked if they usually picked up their refills from the pharmacy themselves. The majority of responses were yes (69%), but 15% responded no. Respondents were asked if they made their own doctor appointments. The most frequent response was yes with a frequency of 100. No was selected by 60 respondents. More data about self-management skills can be found in Figure 15.

The last set of questions is asked to help to determine the respondent's healthcare practices. The respondent was asked to respond to the statement that they carry

important health information with them every day. The majority (68%) selected yes I know this and 25% selected that they needed to learn to do this. They were also asked to respond to the statement that they have a plan to keep their health insurance after they are 18 or older. The most frequent answer was yes I know this with a frequency of 121 followed by I need to learn this with a frequency of 115. More data about healthcare practices can be found in Figure 16.

Figure 13: Healthcare Practices in the Last 3 Months

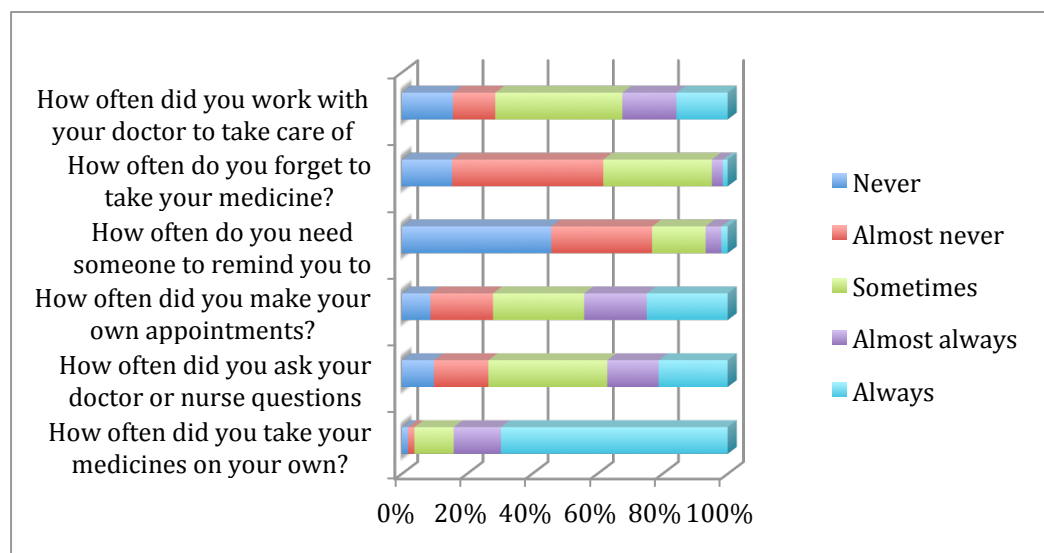


Figure 14: Adherence

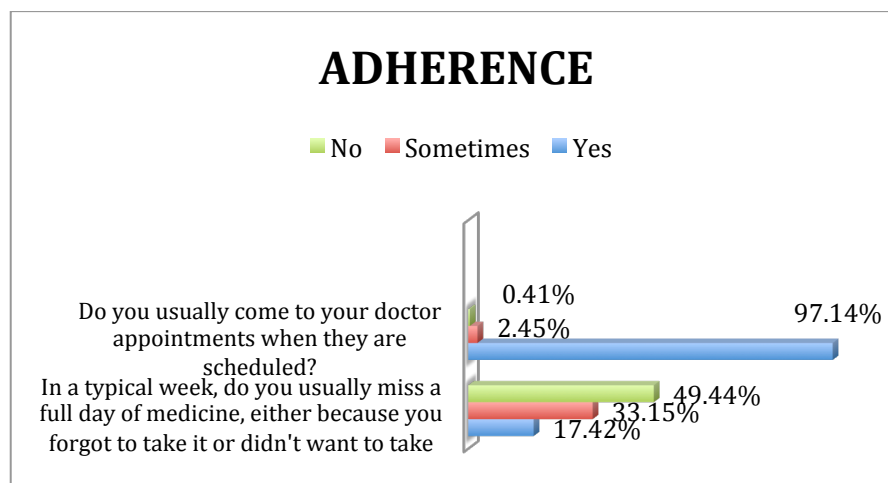


Figure 15: Self-Management Skills

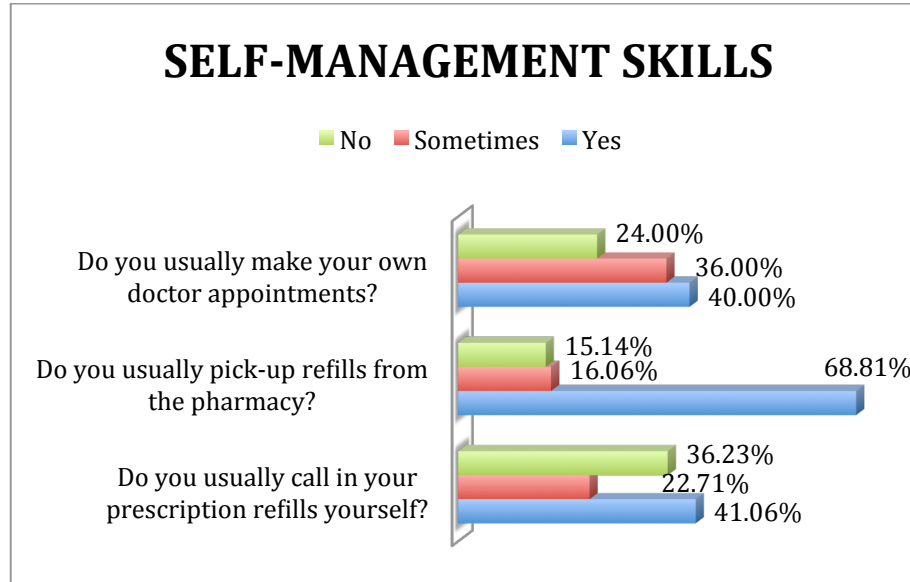
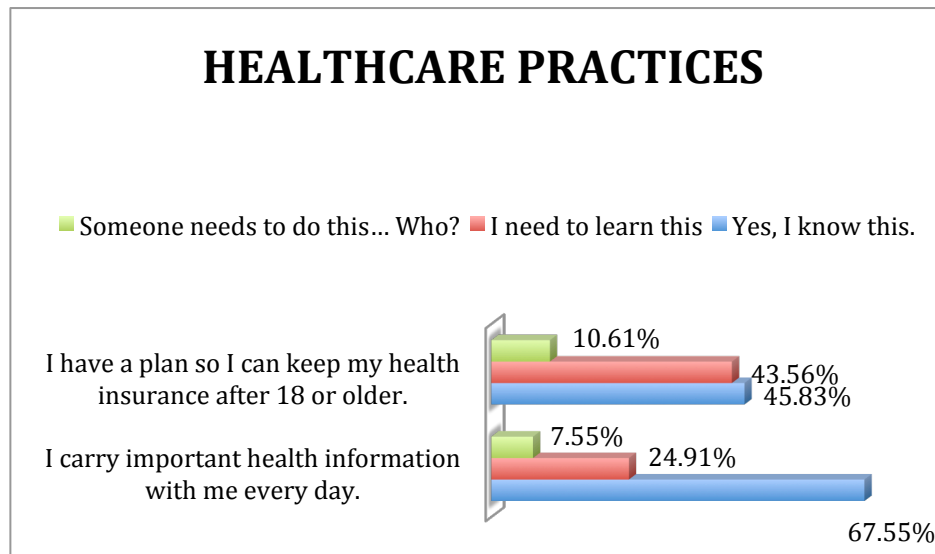


Figure 16: Healthcare Practices



## Barriers to Transitioning

The following questions were asked to determine if there were barriers in healthcare. Respondents were asked how easy or hard it was for them to see a doctor. The most frequent response was very easy with a frequency of 131, but 6 respondents

selected very hard as their choice. Respondents were asked how easy or hard is it to see the doctor by himself or herself. The majority (53%) selected very easy, but 6 (2.24%) respondents selected very hard. The respondents were asked how easy or hard that they think it will be to move from pediatric to adult care. The most common response was very easy with a frequency of 100 and 10 respondents selected very hard. More data about the barriers in healthcare can be found in Figures 17, 18, and 19.

Figure 17: Talking to Your Doctor

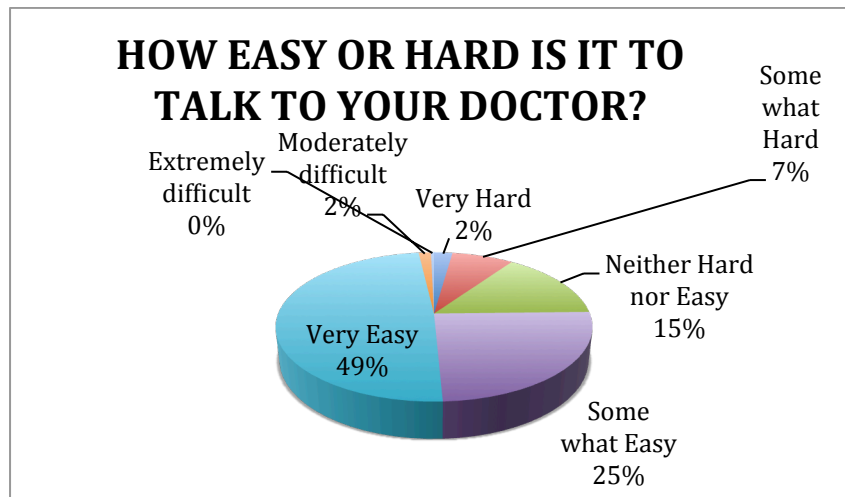


Figure 18: Seeing your Doctor by Yourself

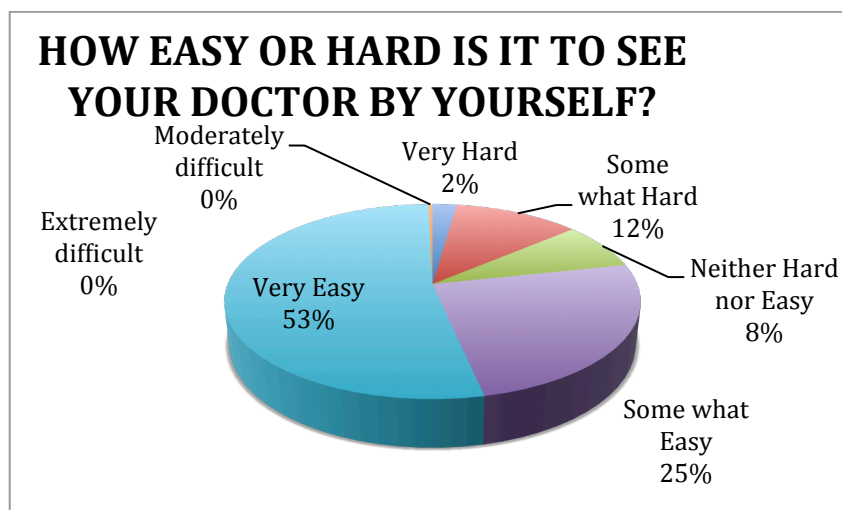
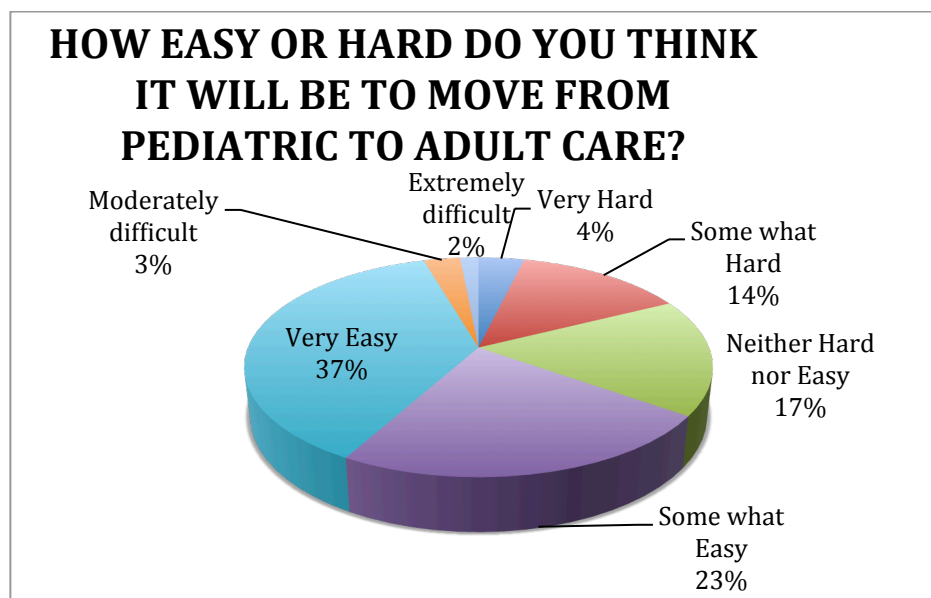


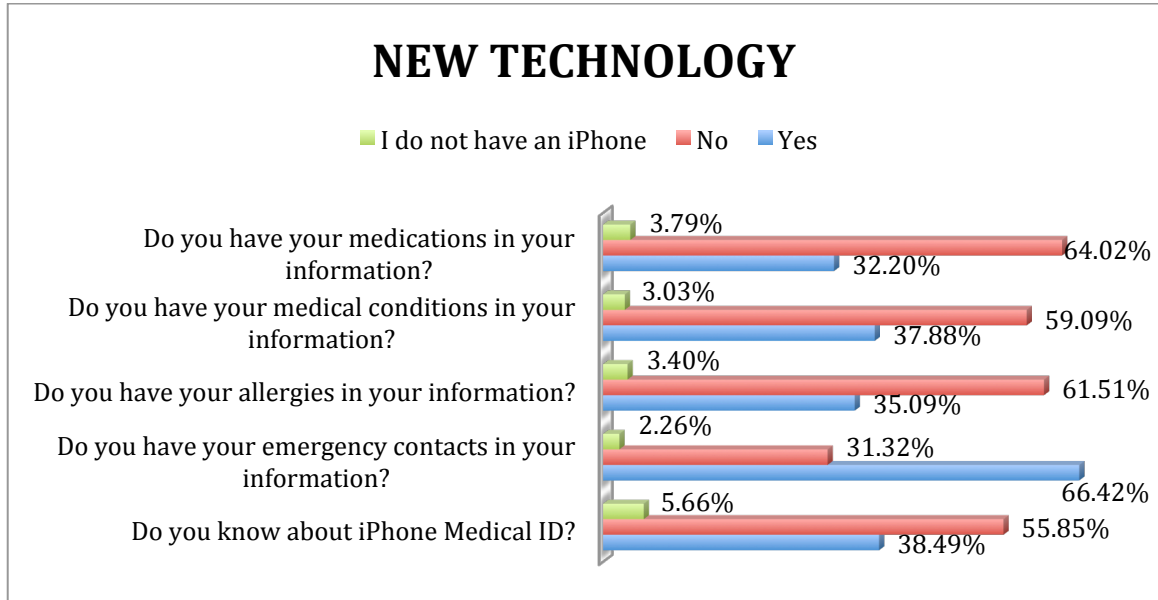
Figure 19: Transitioning Care



### New Technology

A series of questions were asked to determine if respondents were up to date on new technology concerning healthcare. Respondents were asked if they knew about iPhone Medical ID. The majority (56%) of respondents selected no. Respondents were asked if they had their emergency contacts in their information. The majority (66%) of respondents selected yes. Respondents were asked if they had their allergies in their information. The majority (62%) of respondents selected no. Respondents were asked if they had their medical conditions in their information. The majority (59%) of respondents selected no. Respondents were asked if they kept their medications in their information. The majority (64%) of respondents selected no. More data on new technology can be found in Figure 20.

Figure 20: New Technology





## **DISCUSSION**

### **Discussion of Response Rate**

The overall response rate for this survey was very low. The response rate of the EDHE students was very low. The maximum number of 263 responses was collected out of the 3,087 surveys sent. This extremely low rate could be explained by the fact that no personal contact was made and the email was sent out during midterms and the week before sorority and fraternity recruitment. The students were very busy when this survey was sent to them. However, the response rate of the surveys sent to the honors college students was very high. At least 61 responses were received from the 73 surveys sent to honors students. This higher rate could be explained by the fact that personal contact was made with these students, 43 of the students were given time in class to complete the survey, all of these students are expected to complete a research project similar to this one, and the surveys were distributed earlier in the semester before midterms. Out of the total number of surveys taken honors students took at least 23% of the surveys. This is not representative of the freshman population at the University of Mississippi. The honors students in the freshman class make up about 9% of the population. This could potentially skew the data and affect the conclusions of our sample.

### **Discussion of Demographics**

Most of our statistics for the demographics of our respondents matches The University of Mississippi's or the American College Health Association (ACHA) survey's demographics very closely (Mini Fact Book in Excel 2016-2017, 2016; ACHA NCHAI Undergraduate Student Reference Group Data Report Spring 2016, 2016).

Therefore, we can conclude that our study population is a good representative of the freshman class at The University of Mississippi.

Most people who took the survey were 18 to 19 years old, female, white, full-time enrolled, and an American student. This matches the University's demographics of the freshman class. The racial statistics vary slightly, but they do not vary enough to raise concern. A smaller percentage of each of the minorities and a larger percentage of the majority was reported in the survey. The two largest variances in the university population and our respondents are between the white and black populations. The University of Mississippi's enrollment consists of 78% of whites. This is lower than the 88% of whites who took our survey. The university's enrollment also consists of 13% blacks. This is higher than the 8% of respondents who took the survey.

The grades reported by our students are higher than the national average of the ACHA survey. This might be explained because approximately 23% of the respondents were honors students, who normally make higher grades than normal students. It could also be explained by the fact that the survey was sent out early in their first semester at midterms, and the students did not have a full grasp of the differences in high school and collegiate grading at that time.

Two questions were asked in the survey to get a grasp of how many students may have a background of medical knowledge. The national average of people in the healthcare field is 10.7% (Health Care Share of Employment in US Reaches All-Time High of 10.7 Percent, 2013). The survey had more people reporting having a parent with a career in the medical field (20.4%) and more people reported planning on having a career in the medical field (30.4%) than the national average of people in the medical

field. This could have affected or explain some of the responses to the questions focused on healthcare knowledge, adherence, and barriers. Discussion on this topic occurs more in detail later on in this section.

Our data describing general health compares to the national average reported in the ACHA survey with the majority of students reporting that they have good, very good, or excellent health. An interesting piece of data found was that most people who have a chronic illness classified their health as good. We did not ask any additional questions to determine why they consider their health good. This may be something to add to additional studies.

### **Discussion of Health Status**

Most of the students' diseases statistics compare to the national average of the ACHA survey. However, the students in the survey report having ADHD and a learning disability by approximately two times the national average. They also report having partial sightedness/blindness by approximately four times the national average. This could be explained by the fact that Mississippi has a slightly higher than national average percentage of children with ADHD. In 2011, 8.8% of U.S. children and 10.9% of Mississippi children had ADHD (State Profile: Mississippi, 2011). There seems to be no published data regarding collegiate students in Mississippi with ADHD or partial sightedness/blindness. This data represents the baseline data for students at The University of Mississippi.

Most of the student's have been diagnosed and treated for diseases/injuries in numbers that compare to the national average of the ACHA survey. Several of the diseases/injuries that were reported being treated was higher than the national average.

Being treated for a broken bone/fracture/sprain, allergies, migraine headache, and strep throat was approximately two times the national average. Treatment for an ear infection and a sinus infection was nearly three times the national average. We did not conduct a study to further investigate why these diseases/injuries occur in higher frequencies than the national average so we do not know the cause. Additionally, the percentage of students who were treated for an STD was lower than the national average. This could be explained by the fact that these students were freshman that just began college and that they may have not had time to be exposed to STDs or because the health center on campus places one of its focuses on preventing sexually transmitted diseases, but we do not know what exactly is causing this rate to be lower. This may be something to look into in additional studies.

The results about the different illnesses that affected academic performance compare very closely to the national averages in the ACHA survey. Allergies affected more grades in our study than the nation while depression and pregnancy affected grades less than the national average. These conclusions could be explained due to the freshman's current move to Oxford, Mississippi and adjusting to the environment along with these students not being in college long enough to have seen depression and chances for pregnancy to occur. Also, the Health Clinic on campus focuses on reproductive health heavily; this clinic could account for this deviation from the national average. Additionally, students in the ACHA study are from all classes so not all of them have made a recent transition in moving, and a large portion of these students have been in college longer. Females academic performance has been affected more by chronic health problems, chronic pain, depression, drug use, eating disorder, anxiety,

cold/flu/sore throat, and injury. Finances, alcohol use, and ADHD have affected males' academic performance more. It would be very interesting to see why different diseases/injuries affect the genders differently; it would be good to ask additional questions to these students in additional studies to determine why there is a difference among genders and what is causing this difference. An interesting finding is that people who reported one of the conditions affecting their academic performance also reported having better health. In future studies, I would like to ask further questions to these students to determine the true health of the student and determine why they say their health is good but affecting their grades. This seems to be contradicting answers for one student to report both of these.

### **Discussion of Health Knowledge**

The number of students reporting that they always use the Internet, books, or other guides to find out more about their illness (17%) seems low for this age since this age group grew up using the internet. This could be due to the majority of respondents not reporting illnesses or the majority of illnesses being minor issues such as colds and allergies. It could also be due to the majority of people who do not use additional sources for information about their illness ask doctors and nurse questions at least some of the time to figure out the answers. Some trends that were noticed with this question include: people who plan to have a career in the medical field and females use these sources more and people who reported their health as fair used these sources to find out about their illness less than those who reported having better health.

A trend is seen with the students about the knowledge of their health. Students know more about their illness than taking care of their illness. They know the least about what happens if they don't take their medicine. An interesting fact occurs when looking at this data. Males know less about each of these components than females. This data is alarming considering they are now responsible for their own health. An organization or department on campus needs to take the initiative to help educate students about their illness along with teaching how to take care of it and the implications of what happens if they do not take their medications properly.

While the majority responded that they knew their symptoms, medicines, allergies, what to do in case of a medical emergency, that health care privacy changes at age 18, where to get medical care when a doctor's office is closed, and how to fill out medical forms. A significant proportion responded that they needed to learn each of these things. In general, students who plan on having a career in the medical field, who have parents in the medical field, with ADHD, who are females, who have poor health, and who are older know more about these facts. Although, there are a few exceptions such as males know more than females of what to do in case of a medical emergency. Common facts that are unknown by most include: what to do in case of a medical emergency, healthcare privacy changing at age 18, where to go when a doctor's office is closed, and how to fill out medical forms. A significant percentage of students with chronic illness do not know these commonly unknown facts along with their allergies. Students are not fully knowledgeable on healthcare facts for being primarily responsible for his or her own health. They need to be educated on these facts to become successful at managing their own healthcare.

Data for the primary source of health insurance matches the national average in the ACHA survey for people not having health insurance and not knowing if they have health insurance or not. Students in our survey reported having their parent's insurance plan more than the national average and having a college/university sponsored plan or another plan lower than average. It seems that more students in our study will be covered until age 26 without having to search for their own plan than most students in the nation.

### **Discussion of Healthcare Practices**

Even though most of the students responded that they take their medicines on their own, ask a doctor or nurse questions about their illness, make their own appointments, do not need to be reminded to take their medicines, do not forget to take their medicine, and work with their doctor to take care of new health problems at least some of the time, a significant portion of students reported never doing some of these things. Students with ADHD and chronic illness seem to have issues with a majority of these factors higher than the others. These students who responded never are not capable of taking care of their own health by themselves and need help in this transitioning time of managing their own healthcare.

Most students responded that they go to their own doctor's appointments when they are scheduled. Males and younger students struggle the most with this. A significant portion of students report missing a full day of medicine either because they forgot to take it or did not want to take it (17.4%). This number can be lowered by services on campus that can teach student's ways to remember taking their medications and the implications of what happens if they don't take their medications. Students with

ADHD and chronic illness struggle the most with this. Groups on campus should target these groups of students.

Most students responded that they know or have an idea about their nutrition, but approximately 43.7% reported not knowing about their nutrition. Mississippi has the third highest rate of obesity in the U.S. (Mississippi State Department of Health Obesity Action Plan 2016, 2016). This is a great area that different organizations and departments on campus can increase awareness and educate the students on proper nutrition. The Nutrition Department at the university already has a nutrition clinic to help students set nutrition-related goals. However, students are not using these services to their full advantage and these services should be advertised more.

When looking at the self-management skills reported in this survey, most of the students call in prescription refills for themselves, pick up their refills for themselves, and usually make their own doctors appointments at least some of the time. However, a significant proportion ranging from 15% to 36% do not ever do these things. People with ADHD, with chronic illness, and who are males seem to be struggling with their self-management skills more than others. People with poor health and those who know a lot about their illness along with taking care of their illness had better self-management skills. The students who are dependent on others for these services could have issues if these students become ill away from those they are dependent on. Students need to proactively be taught how to do each of these skills.

The majority of students report that they keep important health information with them every day (68%). This number seems extremely high for this age group and not representative of the entire population. People with a parent in the medical field and who



are males carry this information with them more than others. People with chronic illness seem to struggle with carrying their important health information with them. Students need to be taught what is considered important medical information and that it should be carried with them daily.

The majority of students do not have a plan to keep their health insurance when they are 18 or older. About 57% of people with chronic illness did not know or admitted they needed to learn that they needed a plan to keep their insurance at age 18 or older. This is not as big an issue anymore since the passing of the Affordable Care Act in 2009 which expanded student's the right to be a dependent on their parent's health insurance plan until age 26; however, most students probably do not about this law. A good topic for an organization or department on campus to focus on would be to provide the knowledge of how to get health insurance when the students graduate college.

### **Discussion of Barriers of Transitioning**

The majority of students report that they do not have issues talking to their doctor, seeing a doctor by themselves, or think it will be hard to switch from pediatric to adult care, but a small proportion seem to need help in all three of these issues. People with a parent in the medical field, who are younger, and who are males find it harder to talk to their doctor and see a doctor by himself or herself. A significant percentage of students with chronic illness say it is somewhat hard to see a doctor by himself or herself and that it will be somewhat hard to move from pediatric to adult care. The school should have some kind of medical counseling center for these students to go to who require additional help so that they can become comfortable communicating with their doctors.

### **Discussion of New Technology**

According to our survey, the majority of students do now know about iPhone medical ID or have their information in this system besides their emergency contacts. People who plan to have a career in the medical field, have a parent with a career in the medical field, and have chronic illness know more about the iPhone medical ID than others. Approximately 6% of the respondents do not have an iPhone. It is very odd that students have not used this function of their iPhones. This is a simple function that allows anyone to pick up an iPhone in an emergent situation and quickly see the persons name, birthdate, medications, emergent contacts, weight, height, medical conditions, medical notes, allergies, blood type, and organ donor preferences. This tool needs to be advertised to collegiate students so that this tool could potentially benefit someone in an emergency situation.

## CONCLUSION

This study aimed to measure students' needs for healthcare services during their transition from pediatric to adult healthcare at The University of Mississippi. As discussed previously, the students at the university would benefit from organizations or departments on campus setting up services for students to go to that will educate them on their health, teach them how to self-manage their health and use health services, and reduce any barriers that the students have in communicating with their doctors. Students with ADHD and chronic illness need to be targeted by these services first. The university already offers several services to students such as the UM Nutrition Clinic and the Diabetes Self-Management project. These programs need to be advertised more so that more students can utilize these services. Additional services that students at the university would benefit from include: information about what to do in case of medical emergencies, information on which clinics/hospitals in the community are open after normal doctors hours, information about how to get health insurance and what to look for in different health insurance plans when they graduate, and a service to advertise new technology that can benefit healthcare practices and knowledge.

Additional studies need to be done to compare the college student's knowledge about healthcare. These studies need to be expanded to all classes along with being conducted at other universities. Additional questions should be inserted for students when they selected unusual combinations of answers to determine what they meant. An example would include adding an additional question for someone who reported having chronic illness but considering his or her health to be good. Also, more focus should be

put on why student's academic performance is affected differently by disease/injury so that schools can develop programs to help reduce this issue. With these additional studies, the data can be compared at a regional level and more standardized programs can be formed to help the students learn about their healthcare.

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## **APPENDICES**

Appendix A: Survey Questions

Appendix B: Email to Dr. John Samonds

Appendix C: Email to Dr. Dewey Knight

Appendix D: Email Script to Students

Appendix E: Instructions to Instructors

Appendix F: Instructions Delivered Orally by Investigator

## Appendix A: Survey Questions

### Student Health Needs Assessment

Q1 Please select the range that includes your current age.

- ☐ Under 18 (Please stop here) (1)
- ☐ 19 (2)
- ☐ 20 (3)
- ☐ 21 (6)
- ☐ 22 (4)
- ☐ 23 (5)
- ☐ 24 or older (7)

If Under 18 (Please stop here) Is Selected, Then Skip To End of Survey

Q2 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Transgender (3)

Q3 How do you usually describe yourself?

- ☐ African American or Black (1)
- ☐ American Indian, Alaskan Native, or Native Hawaiian (2)
- ☐ Asian or Pacific Islander (3)
- ☐ Hispanic or Latino/a (4)
- ☐ White (5)
- ☐ Biracial or Multiracial (6)
- ☐ Other (7)

Q4 What is your enrollment status?

- ☐ Full time (1)
- ☐ Part time (2)
- ☐ Other (3)

Q5 Are you an international student?

- ☐ Yes (1)
- ☐ No (2)

Q6 Where do you currently live?

- ☐ Campus residence hall (1)
- ☐ Fraternity or sorority house (2)
- ☐ Other on-campus/university housing (3)
- ☐ Parent/guardian home (4)
- ☐ Other off-campus housing (5)
- ☐ Other (6)

Q7 Are you a member of a social fraternity or sorority?

- ☐ Yes (1)
- ☐ No (2)

Q8 What do you expect your cumulative grade point average to be at the end of this semester?

- ☐ 3.51- 4.0 (1)
- ☐ 3.01- 3.5 (2)
- ☐ 2.51- 3.0 (3)
- ☐ 2.0- 2.50 (4)
- ☐ 2.0 or below (5)

Q9 Is one (or both) of your parents career in the medical field?

- ☐ Yes (1)
- ☐ No (2)

Q10 Do you plan to have a career in the medical field?

- ☐ Yes (1)
- ☐ No (2)

Q11 How would you describe your general health?

- ☐ Excellent (1)
- ☐ Very Good (2)
- ☐ Good (3)
- ☐ Fair (4)
- ☐ Poor (5)
- ☐ Don't Know (6)

Q12 Do you have any of the following? (Please select the appropriate answer for each statement.)

	Yes (1)	No (2)
Attention Deficit and Hyperactivity Disorder (ADHD) (1)	<input type="radio"/>	<input type="radio"/>
Chronic Illness (e.g. cancer, diabetes, auto-immune disorders) (2)	<input type="radio"/>	<input type="radio"/>
Deafness/Hearing loss (3)	<input type="radio"/>	<input type="radio"/>
Learning Disability (4)	<input type="radio"/>	<input type="radio"/>
Mobility/Dexterity Disability (5)	<input type="radio"/>	<input type="radio"/>
Partial Sightedness/Blindness (6)	<input type="radio"/>	<input type="radio"/>
Psychiatric Condition (7)	<input type="radio"/>	<input type="radio"/>
Speech or Language Disorder (8)	<input type="radio"/>	<input type="radio"/>
Other Disorder (9)	<input type="radio"/>	<input type="radio"/>

Q13 Within the last 12 months, have you been diagnosed or treated by a professional for any of the following? (Please select the appropriate answer for each statement.)

	Yes (1)	No (2)
Allergies (1)	<input type="radio"/>	<input type="radio"/>
Asthma (2)	<input type="radio"/>	<input type="radio"/>
Back Pain (3)	<input type="radio"/>	<input type="radio"/>
Broken Bone/ Fracture/ Sprain (4)	<input type="radio"/>	<input type="radio"/>
Bronchitis (5)	<input type="radio"/>	<input type="radio"/>
Chlamydia (6)	<input type="radio"/>	<input type="radio"/>
Diabetes (7)	<input type="radio"/>	<input type="radio"/>
Ear Infection (8)	<input type="radio"/>	<input type="radio"/>
Genital Herpes (9)	<input type="radio"/>	<input type="radio"/>
Genital Warts/ Human Papillomavirus (HPV) (10)	<input type="radio"/>	<input type="radio"/>
Gonorrhea (11)	<input type="radio"/>	<input type="radio"/>
Hepatitis B or C (12)	<input type="radio"/>	<input type="radio"/>
High Blood Pressure (13)	<input type="radio"/>	<input type="radio"/>
High Cholesterol (14)	<input type="radio"/>	<input type="radio"/>
Human Immunodeficiency Virus (HIV) (15)	<input type="radio"/>	<input type="radio"/>
Irritable Bowel Syndrome (IBS) (16)	<input type="radio"/>	<input type="radio"/>
Migraine Headaches (17)	<input type="radio"/>	<input type="radio"/>
Pelvic Inflammatory Disease (PID) (18)	<input type="radio"/>	<input type="radio"/>
Sinus Infection (19)	<input type="radio"/>	<input type="radio"/>
Strep Throat (20)	<input type="radio"/>	<input type="radio"/>
Tuberculosis (21)	<input type="radio"/>	<input type="radio"/>
Urinary tract infection (22)	<input type="radio"/>	<input type="radio"/>

Q14 Within the last 12 months, have any of the following affected you academic performance? (Please select the most serious outcome for each item below.)

	This did not happen to me/ Not applicable (1)	I have experienced this issue but my academic have not been affected (2)	Received a lower grade on an exam or important project (3)	Received a lower grade in the course (4)	Received an incomplete or dropped the course (5)	Significant disruption in thesis, dissertation, research, or practicum work (6)
Chronic health problem or serious illness (e.g., diabetes, asthma, cancer) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chronic pain (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drug use (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eating disorder/problem (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finances (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcohol use (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allergies (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assault (physical) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assault (sexual) (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attention Deficit and Hyperactivity Disorder (ADHD) (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold / Flu / Sore Throat (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injury (fracture, sprain, strain, cut) (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning Disability (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pregnancy (yours or your partner's) (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 How often do you use the Internet, books, or other guides to find out more about your illness?

- ☐ Never (1)
- ☐ Almost Never (2)
- ☐ Sometimes (3)
- ☐ Almost Always (4)
- ☐ Always (5)
- ☐ Not applicable (6)

Q16 Some patients know a lot about their health and some patients don't. How much do you know? Please check the answer that best describes how much you feel you know today.

	Nothing (1)	Not Much (2)	A little (3)	Some (4)	A lot (5)	Not applicable (6)
How much do you know about your illness? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do you know about taking care of your illness? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do you know about what will happen if you don't take your medicines? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 Please answer these questions about your healthcare knowledge.

	Yes, I know this (1)	I need to learn (2)	Someone needs to do this... Who? (3)
I know my symptoms including ones that I quickly need to see a doctor for. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what to do in case I have a medical emergency. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know my own medicines, what they are for, and when I need to take them. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know my allergies to medicines and medicines I should not take. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand how health care privacy changes at age 18 when legally an adult. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know where to get medical care when the doctor's office is closed. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to fill out medical forms. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 What is your primary source of health insurance?

- ☐ My college/ university sponsored plan (1)
- ☐ My parent's plan (2)
- ☐ Another plan (3)
- ☐ I don't have health insurance (4)
- ☐ I am not sure if I have health insurance (5)



Q19 In the past 3 months...

	Never (1)	Almost Never (2)	Sometimes (3)	Almost Always (4)	Always (5)	I do not take medicines right now (6)
How often did you take your medicines on your own? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you ask your doctor or nurse questions about your illness, medicines, or medical care? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you make your own appointments? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you need someone to remind you to take your medicines? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you forget to take your medicine? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you work with your doctor to take care of new health problems that came up? (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Please answer these questions about adherence.

	Yes (1)	Sometimes (2)	No (3)	Not Applicable (4)
In a typical week, do you usually miss a full day of medicine , either because you forgot to take it or didn't want to take it? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you usually come to your doctor appointments when they are scheduled? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21 Please answer the following question about your nutrition.

	Know definitely (1)	Has an idea (2)	Does not know (3)
Are you supposed to follow any special diet because you have [name of health condition]? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q22 Please answer the following questions about self-management skills.

	Yes (1)	Sometimes (2)	No (3)	Not Applicable (4)
Do you usually call in your prescription refills yourself? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you usually pick-up refills from the pharmacy yourself? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you usually make your own doctor appointments? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23 Please answer the following questions about your healthcare practices.

	Yes, I know this (1)	I need to learn this (2)	Someone needs to do this.. Who? (3)
I carry important health information with me every day (e.g. insurance card, allergies, medications, emergency contact information, medical summary). (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a plan so I can keep my health insurance after 18 or older. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q24 Some patients may find it hard to do certain things. How easy or hard is it for you to do the following?  
Please check the answer that best describes how you feel today.

	Very Hard (1)	Somewhat Hard (2)	Neither Hard nor Easy (3)	Somewhat Easy (4)	Very Easy (5)	Moderately difficult (7)	Extremely difficult (8)
How easy or hard is it to talk to your doctor? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How easy or hard is it to see your doctor by yourself? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How easy or hard do you think it will be to move from pediatric to adult care? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q25 Please answer the following questions about new technology regarding health.

	Yes (1)	No (2)	I do not have an iPhone (3)
Do you know about the iPhone Medical ID? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have your emergency contacts in your information? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have your allergies in your information? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have your medical conditions in your information? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have your medications in your information? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## **Appendix B: Email to Dr. John Samonds**

Subject: Transitioning Healthcare Needs Assessment Survey

John Samonds,

My name is Victoria Miller and I am currently a senior and 1<sup>st</sup> year pharmacy student in the Sally McDonnell Barksdale Honors College working with Dr. Sandra Bentley on a research project for my senior thesis. The study is entitled "Needs Assessment of Healthcare Services for Transitioning College Students." It will assess the healthcare services that transitioning college students need and should increase the knowledge about student healthcare education.

Would you be willing to allow 10 minutes at the beginning of all of the Freshman Honors 101 classes in order for this survey to be administered? This survey can be distributed in class on a day that is most convenient for your instructors. I can meet with you on a day that is most convenient for you to answer any questions or concerns. It would benefit our project tremendously and we would be very appreciative. Please reply directly to this email (it will go to Victoria Miller).

Thank you for your consideration,

Victoria Miller  
Pharmacy Student  
University of Mississippi  
School of Pharmacy  
University, MS 38677  
256-898-4875  
[vmille3@go.olemiss.edu](mailto:vmille3@go.olemiss.edu)

Sandra Bentley, PharmD.  
Clinical Assistant Professor  
Department of Pharmacy Practice  
School of Pharmacy  
University, MS 38677  
662-915-5279  
[sbentley@olemiss.edu](mailto:sbentley@olemiss.edu)

## **Appendix C: Email to Dr. Dewey Knight**

Subject: Transitioning Healthcare Needs Assessment Survey

Dewey Knight,

My name is Victoria Miller and I am currently a 1<sup>st</sup> year pharmacy student in the Sally McDonnell Barksdale Honors College working with Dr. Sandra Bentley on a research project for my senior thesis. The study is entitled "Needs Assessment of Healthcare Services for Transitioning College Students." It will assess the healthcare services that transitioning college students need and should increase the knowledge about student healthcare education.

Would you be willing to allow 10 minutes at the beginning of all of the Freshman EDHE classes in order for this survey to be administered? This survey can be distributed in class on a day that is most convenient for your instructors. I can meet with you on a day that is most convenient for you to answer any questions or concerns. It would benefit our project tremendously and we would be very appreciative. Please reply directly to this email (it will go to Victoria Miller).

Thank you for your consideration,

Victoria Miller  
Pharmacy Student  
University of Mississippi  
School of Pharmacy  
University, MS 38677  
256-898-4875  
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## **Appendix D: Email Script to Students**

Dear Ole Miss Student,

You are invited to participate in a survey about transitioning college students' healthcare needs. This survey is part of a research project being conducted by Victoria Miller, a pharmacy student, and Dr. Sandra Bentley at The University of Mississippi.

Your participation in this survey is completely voluntary and you may stop the survey or skip any question at any time. Completion of this survey will take approximately 10 minutes. There are no known risks from participating in this research study. The survey is completely anonymous.

The link to this survey is attached below in this email. The survey can be taken on any electronic device, but we prefer you to take it on a computer.

We really appreciate your help with this important project.

[http://uofmississippi.qualtrics.com/SE/?SID=SV\\_00Mxorx0jPHpyHH](http://uofmississippi.qualtrics.com/SE/?SID=SV_00Mxorx0jPHpyHH)

## **Appendix E: Instructions to Instructors**

### Instructions to Instructors

A few days before you will distribute the survey

Step 1: Send an email or tell you students in class to bring a laptop (preferably) or phone to the next class

On the day you will distribute the survey

Step 2: Read instructions to class

Step 3: Send the class the Qualtrics survey link in an email

Step 4: Begin the class one everyone has finished the survey



## **Appendix F: Instructions Delivered Orally by Investigator**

### Instructions Delivered Orally by Instructors

“You are being invited to participate in a survey about transitioning college students’ healthcare needs. We would really like each and every one of you to complete the survey, because that will give us the most accurate numbers for our campus.

The survey is 25 questions with the first question asking your age. Your instructor will send you the link to the survey in an email shortly. The survey can be taken on any electronic device, but we prefer you to take it on a computer.

Your participation in this survey is completely voluntary and you may stop the survey or skip any question at any time. It should take you about 10 minutes to complete, and the survey is completely anonymous.

We really appreciate your help with this important project.”